

1 Education and Workforce Development Cabinet

2 Kentucky Board of Education

3 Department of Education

4 (Amended After Comments)

5 705 KAR 4:250. Energy technology engineering career pathway.

6 RELATES TO: KRS 158.808, 158.810

7 STATUTORY AUTHORITY: KRS 156.070, 158.808

8 NECESSITY, FUNCTION, AND CONFORMITY: KRS 158.808 requires the [Kentucky]

9 Department of Education (department) to establish and administer an energy technology

10 engineering career pathway, approve grant recipients, and distribute funds to local school

11 districts. The Kentucky Board of Education is authorized by KRS 158.808 to promulgate

12 administrative regulations for the administration of that program. This administrative regulation

13 establishes a process for the department [Kentucky Board of Education] to administer the energy

14 technology engineering career track program, approve grant recipients, and distribute funds to

15 local school districts.

16 Section 1. Definitions. [~~Definition.~~] (1) "Career pathway **program of study**" is defined in KRS

17 158.810(7)[(6)] [~~means a coherent, articulated sequence of rigorous academic and career and~~

18 ~~technical courses, including dual credit opportunities, leading to a postsecondary degree or~~

19 ~~industry-recognized certification or licensure, that is developed, implemented, and maintained in~~

20 ~~partnership with secondary and postsecondary institutions, businesses, and employers].~~

21 (2) "Secondary area center" is defined in KRS 158.810(11).

Section 2. Application Process. (1) A Kentucky public school district shall be eligible to apply for a grant through a request for proposal process.

(2) A local school district superintendent shall submit the application and have the approval of participating schools' school-based decision making councils and local board of education.

(3) A grant application shall indicate the fiscal agent as:

(a) A local board of education for all district comprehensive secondary schools and locally-operated secondary area centers; or

(b) The department's Office of Career and Technical Education for all state-operated secondary area centers.

(4) To be eligible for funding, an applicant school shall provide an energy career pathway which includes the following components:

(a) Energy-related applications, including energy and power technology, engineering design and development, and energy-related research and applications as developed by the department in consultation with representatives from the energy technology industry, the University of Kentucky Center for Applied Energy Research, the Council on Postsecondary Education, the Kentucky Community and Technical College System, the Kentucky Department for Energy Development and Independence, and local school districts ~~[The Project Lead the Way middle school program Gateway to Technology, with content to include energy related activities and the following Project Lead the Way pre-engineering courses at the high school level:~~

~~1. Introduction to Engineering Design;~~

~~2. Principles of Engineering;~~

~~3. Digital Electronics;~~

~~4. A specialized course in Energy and Power Technology, or integration of energy related~~

1 content and applications in each of the Project Lead the way courses. The content shall include
2 energy-related applications as developed by the Kentucky Department of Education, in
3 consultation with representatives from the energy technology industry, the University of
4 Kentucky Center for Applied Energy Research, the Council on Postsecondary Education, the
5 Kentucky Community and Technical College System, Governor's Office of Energy Policy, local
6 school districts, and Project Lead the Way; and

7 5. Engineering Design and Development, with content to include energy-related research and
8 applications];

9 (b) A curriculum that has been reviewed and is supported by representatives from the
10 energy technology industry and by an institution of higher education as a curriculum that
11 will prepare students for success in either college or career within the energy industry;

12 (c) The opportunity for students to participate in energy related internships or cooperative
13 education with energy-related industries or postsecondary education;

14 (d)(e) Matching funds that shall be allocated to directly support the implementation of the
15 program, which may include other state, federal, local, or nonpublic sources, within the uses and
16 conditions set forth by the source of those funds. Previously awarded energy and engineering
17 initiative [Project Lead the Way] state grants and local matches shall not be considered as
18 matching funds for this program; and

19 (e)(d) [Status as a registered Project Lead The Way site prior to disbursement of funds; and

20 (e)] Submission of seven (7) complete copies of the application plus an electronic copy.

21 Section 3. Selection of Grants. (1) The criteria for selection of applications for funding shall be
22 based on the appropriateness and quality of the following:

23 (a) Process for identifying potential students and estimated enrollment in the Energy Technology

- 1 Engineering Career Pathway;
- 2 (b) An implementation plan, which includes:
 - 3 1. Computer availability, including hardware and software commonly used in related fields;
 - 4 2. Teacher availability and certification;
 - 5 3. Elementary school integration;
 - 6 4. Middle school and high school program;
 - 7 5. Measures of student progress to be utilized;
 - 8 6. Instructional space;
 - 9 7. Student Recruitment Plan, including recruitment of traditionally underserved populations;
 - 10 8. Business and postsecondary partners and other education partnerships; and
 - 11 9. Narrative of budget and timeline, including the efficient and effective use of proposed grant
 - 12 funds and matching funds;
- 13 (c) Program evaluation to include annual graduate follow-up surveys; and
- 14 (d) Level of individual school and district commitment for teacher professional development [;
- 15 and
- 16 ~~(e) Narrative of budget and timeline, including the efficient and effective use of proposed grant~~
- 17 ~~funds and matching funds].~~
- 18 (2) An application shall be reviewed as follows:
 - 19 (a) A team of evaluators shall review the application; and
 - 20 (b) [1.] The department [Kentucky Department of Education] shall approve funding based upon
 - 21 the results of the review.
 - 22 (3) [2.] Consideration may be given to provide for geographic diversity and the number of
 - 23 students to be served in order to maximize the benefits of the program.

Section 4. Grant Allocations and Requirements. (1) The award size or range of grants shall be determined by the department [~~Kentucky Department of Education~~].

(2) Allowable expenditures include:

(a) Laboratory equipment and instructional materials necessary for ~~[Project Lead the Way]~~ instruction;

(b) Computers and computer upgrades;

(c) Computer software required by the curriculum ~~[Project Lead the Way]~~;

(d) A laptop computer for the instructor;

(e) Travel expenses and registration fees for teachers and school administrators, including school counselors, to attend [the] required conferences and trainings ~~[Project Lead the Way counselors conference]~~;

~~(f) [Travel expenses and registration fees for teachers to attend the required Project Lead the Way summer teacher institutes;~~

~~(g)~~ Resources and professional learning ~~[development]~~ for integrating energy activities in the curriculum; and

~~(g) [(h)]~~ Energy related instructional materials and equipment.

(3) State grant funds shall not be used to maintain, renovate, or build facilities or pay teacher salaries, but local district expenditures for these purposes may be included as matching funds.

(4) Monitoring of awarded grants shall include the following:

(a) Fiscal reports submitted semi-annually ~~[quarterly]~~ to the department ~~[of Education]~~; and

(b) Annual program evaluation report on the implementation plan that outlines the project accomplishments related to the project need, objectives, and outcomes.

This is to certify that the chief state school officer has reviewed and recommended this administrative regulation prior to its adoption by the Kentucky Board of Education, as required by KRS 156.070(5).

12-15-14
(Date)

Terry Holliday, Ph.D.
Terry Holliday, Ph.D.
Commissioner of Education

12-15-14
(Date)

Roger L. Marcum, Chairperson
Roger L. Marcum, Chairperson
Kentucky Board of Education

REGULATORY IMPACT ANALYSIS AND TIERING STATEMENT

Administrative Regulation: 704 KAR 4:250

Agency Contact Person: Kevin C. Brown

(1) Provide a brief summary of:

(a) What this administrative regulation does: This administrative regulation establishes the processes to be followed by the agency when administering the energy technology engineering career track program, approving grant recipients, and distributing the funds to local districts.

(b) The necessity of this administrative regulation: This administrative regulation was necessary to implement provisions of KRS 158.808 that required the agency to establish an energy and engineering technology career track program and distribute funds to local school districts that wish to implement such career pathways.

(c) How this administrative regulation conforms to the content of the authorizing statute: This administrative regulation provides criteria for the grant application process, as well as guidance surrounding proper implementation plans and data reporting procedures.

(d) How this administrative regulation currently assists or will assist in the effective administration of the statutes: This administrative regulation provides specifics on how to apply for the implementation and sustainability funds outlined in KRS 158.808 that are available to districts that offer these pathways at the middle and high school levels.

(2) If this is an amendment to an existing administrative regulation, provide a brief summary of:

(a) How the amendment will change this existing administrative regulation: The amendments would ensure equitable access to the grant funds, regardless of the district's chosen pathway curriculum. Vendor-specific language within the original form of the administrative regulation has been removed, as this decision should be made based upon the needs of the specific school and the local industry.

(b) The necessity of the amendment to this administrative regulation: As new and emerging secondary programs are developed around the STEM (Science, Technology, Engineer and Technology) fields, and these programs continue to grow in popularity and demand, the need has become evident to provide greater accessibility to these grant funds.

(c) How the amendment conforms to the content of the authorizing statute: The amendments maintain the integrity of the grant application process, as well as the implementation and data reporting procedures.

(d) How the amendment will assist in the effective administration of the statutes: The amendments seek to promote and increase participation in these career pathways through the financial support of the grant funds.

(3) List the type and number of individuals, businesses, organizations, or state and local governments affected by this administrative regulation: All public school districts and state-operated area technology centers in Kentucky that offer energy and engineering technology career pathways.

(4) Provide an analysis of how the entities identified in question (3) will be impacted by either the implementation of this administrative regulation, if new, or by the change, if it is an amendment, including: The administrative regulation will impact identified schools and districts by providing the detail necessary to apply for the grant funding outlined in KRS 158.808.

(a) List the actions that each of the regulated entities identified in question (3) will have to take to comply with this administrative regulation or amendment: School districts wishing to apply for such funds must submit a formal application that adheres to the requirements outlined in the administrative regulation. They must also comply with the implementation and sustainability plans, as well as accurate and timely data reporting requirements.

(b) In complying with this administrative regulation or amendment, how much will it cost each of the entities identified in question (3): The chosen school districts to be awarded the grant funds are required to find matching funds, allocated directly to support the implementation of the program. The number of awardees and the award amounts are determined each year by the agency.

(c) As a result of compliance, what benefits will accrue to the entities identified in question (3): This administrative regulation will benefit school districts by ensuring that all who desire to offer such pathways have the same access and opportunity to apply for these implementation and sustainability funds, regardless of what program or curriculum vendor they choose.

(5) Provide an estimate of how much it will cost the administrative body to implement this administrative regulation:

(a) Initially: No additional costs

(b) On a continuing basis: No additional costs

(6) What is the source of the funding to be used for the implementation and enforcement of this administrative regulation: General funds

(7) Provide an assessment of whether an increase in fees or funding will be necessary to implement this administrative regulation, if new, or by the change if it is an amendment: No increase will be necessary.

(8) State whether or not this administrative regulation establishes any fees or directly or indirectly increases any fees: This administrative regulation does not establish fees or directly or indirectly increase any fees.

(9) TIERING: Is tiering applied? (Explain why or why not) Tiering was not appropriate in this administrative regulation because the administrative regulation applies equally to all school districts that offer these pathways.

FISCAL NOTE ON STATE OR LOCAL GOVERNMENT

Regulation Number: 705 KAR 4:250

Contact Person: Kevin C. Brown

Phone number: 564-4474

(1) What units, parts, or divisions of state or local government (including cities, counties, fire departments, or school districts) will be impacted by this administrative regulation? All Kentucky school districts

(2) Identify each state or federal statute or federal regulation that requires or authorizes the action taken by the administrative regulation. KRS 158.808, KRS 158.810

(3) Estimate the effect of this administrative regulation on the expenditures and revenues of a state or local government agency (including cities, counties, fire departments, or school districts) for the first full year the administrative regulation is to be in effect.

(a) How much revenue will this administrative regulation generate for the state or local government (including cities, counties, fire departments, or school districts) for the first year? N/A

(b) How much revenue will this administrative regulation generate for the state or local government (including cities, counties, fire departments, or school districts) for subsequent years? N/A

(c) How much will it cost to administer this program for the first year? No additional costs from previous years.

(d) How much will it cost to administer this program for subsequent years? No additional costs for subsequent years.

Note: If specific dollar estimates cannot be determined, provide a brief narrative to explain the fiscal impact of the administrative regulation.

Revenues (+/-):

Expenditures (+/-):

Other Explanation:

**STATEMENT OF CONSIDERATION
RELATING TO 705 KAR 4:250
Energy Technology Engineering Career Pathway
Kentucky Department of Education**

Amended After Comments

1. A public hearing was scheduled on the above regulation on November 21, 2014 at 10:00 a.m. Eastern Time, in the State Board Room, Kentucky Department of Education, 500 Mero Street, 1st Floor, Frankfort, Kentucky, but was cancelled when no one indicated a desire to speak.
2. The following individuals submitted written comments:

<u>Name and Title</u>	<u>Agency/Organization/Entity/Other</u>
J. Domenic Giandomenico, Director	Project Lead the Way

3. The following people from the promulgating administrative body responded to the written comments:

Name and Title
Kevin Brown, Associate Commissioner/ General Counsel, Office of Guiding Support Services
Chase Bannister, Staff Attorney, Office of Guiding Support Services
Amy Peabody, Assistant General Counsel, Office of Guiding Support Services
Dale Winkler, Associate Commissioner, Office of Career and Technical Education
Leslie Slaughter, Policy Advisor, Office of Career and Technical Education

Summary of Comments and Responses

1. Subject Matter: Definition of "Career Pathway"
 - (a) Comment: The commenter stated that the definition given of "Career Pathway" in Section 1(1) was not the most suitable definition permitted by KRS 158.810. The commenter stated that the definition provided in the proposed regulation only connected secondary education and postsecondary education in a "somewhat casual way" that may lead students to a variety of outcomes. The commenter also stated that "adult learners" are included in the definition of a "Career pathway" under KRS 158.810(6).

The commenter suggested the definition of "Career pathway program of study" contained in KRS 158.810 (7) is more appropriate because that definition is more consistent with the terms of the grant which provides funding for the program at issue. The commenter stated that the proposed definition more clearly and succinctly spells out expectations for the student outcomes produced by the program. The commenter stated that the objective of this comment is to ensure that students enrolled in the program will be adequately prepared to thrive in college or in their careers.

(b) Response: The agency agrees that "Career Pathway Program of Study," as defined in KRS 158.810(7), more accurately identifies the intended audience of the grant funding; therefore, the agency has made changes to the administrative regulation as a result of this comment.

While the term "career pathway" is used at the secondary level to define the curriculum and course sequence that a student must complete in a particular career exploration program, it is understood that this term also includes postsecondary education and the career opportunities that exist for all students (both secondary and adult learners) who are concentrating in this career pathway.

2. Subject Matter: Postsecondary Approval of Secondary Career Pathway

(a) Comment: The commenter stated that colleges and universities need to be a key component in all aspects of the program if the goal of the proposed amendment is to prepare students for postsecondary education. In light of this, the commenter suggested that the application process require an institution of higher education that confers degrees in engineering be part of the decision-making process to determine if an application should be accepted. Additionally, the commenter suggested that the school-based decision making council, local board of education, and the institution of higher education all indicate, by signing, their approval of the application.

The commenter suggested that adding colleges and universities as part of the planning process will encourage each applicant to be mindful of the requirements of the program. The commenter expressed that adding colleges and universities to the application process will maintain the quality and academic rigor of the programs of study. The commenter stated that the inclusion of higher education institutions will act as a safeguard against the misalignment of what is learned in high school and what is expected to be known in college. The commenter stated that the purpose of this comment is to ensure students will be adequately prepared to thrive in college or in their careers.

(b) Response: The agency has carefully reviewed this thoughtful comment. The agency agrees that postsecondary institutions are a vital partner in the planning, implementation, and success of secondary career pathways. Both the administrative regulation and the current Request for Application (RFA) developed by the agency, which guides the application process for such energy grant funds, addresses this issue. Section 2 of the eligibility criteria (taken directly from Section 4(b) of 705 KAR 4:250) found in the RFA requires the following:

The opportunity for students to participate in energy related internships or cooperative education with energy-related industries or postsecondary education.

Part B of the "Application Components" portion of this RFA also includes the following criteria:

A thorough description of how the energy technology engineering career pathway is established in the school district to support K-12 students. The plan must also outline and discuss all postsecondary agreements that may lead to course articulations and/or dual credit through various Energy and Engineering technology career pathways.

The agency notes that these requirements ensure that applicants have established postsecondary partnerships for their program and career pathway students. The grant application assurances page, which requires signatures from both the school principal and district superintendent, provides reassurance that the application has been reviewed and approved for implementation by all stakeholders. It also guarantees that the district and school agrees to abide by all requirements, both technical and programmatic, pertaining to the grant.

The commenter's suggestion of signed approval by an institution of higher education that confers degrees in engineering conflicts with KRS 160.345 (2)(i)(1), which states the following regarding School Based Decision Making Councils:

(i) The school council shall adopt a policy to be implemented by the principal in the following additional areas:

1. Determination of curriculum, including needs assessment, curriculum development and responsibilities under KRS 158.6453(7).

Postsecondary institutions do not have the authority or administrative control to grant approval or use of any secondary curriculum chosen by a local school.

After thoughtful consideration, no amendments have been made to the administrative regulation as a result of this comment.

3. Subject Matter: Review of Energy Curriculum by Postsecondary and Industry Partners

(a) Comment: As part of the eligibility requirements for funding, the commenter suggested adding that the curriculum be certified by representatives from the energy technology industry and by an institution of higher education. Additionally, the commenter recommended the curriculum be certified to prepare students for success in either college or a career within the energy industry.

The commenter stated that this comment was made out of a desire to ensure the grant program improves college readiness. The commenter shared that the best way to ensure the program is high quality is to ask institutions of higher education to provide insight on what is taught. Finally, the commenter noted that requiring input by institutions of higher education at the

beginning of the process can maximize efficiency of the grant program, ensure the best use of resources in the classroom, and avoid costly revisions during implementation.

(b) Response: The agency has carefully reviewed this comment, and agrees that the development of all energy curriculums should include the input of both industry experts and postsecondary partners. While the agency supports the overall notion of this comment, the agency considers that the term “certified” may be misleading or subjective. While the intended use of this language is to mean that the curriculum has been reliably endorsed, it could also be interpreted to mean that all curriculums shall be required to undergo a formal certification process in which industry and postsecondary education are involved.

The agency has amended the regulation in response to this comment to ensure that all schools who receive grant funding are utilizing a curriculum that has been vetted by appropriate industry and postsecondary partners. The agency proposes, however, that the term “certified” is not the most suitable language and proposes the following statement:

(b) A curriculum that has been reviewed and is supported by representatives from the energy technology industry and by an institution of higher education as one that will prepare students for success in either college or a career within the energy industry;

4. Subject Matter: Opportunities for Dual and/or Articulated Credit

(a) Comment: The commenter suggested, as part of the components of an energy career pathway, adding the requirement that students have the opportunity to earn college credit by enrolling in dual enrollment or dual credit classes or through an articulation agreement with an institution of higher education. The commenter stated that this comment was made to ensure that students have the opportunity to participate in college-level courses and earn college credit.

The commenter stated that dual credit should be part of any program conducted under the Energy Technology Engineering Career Track Program. The commenter also noted that dual credit courses have a history of improving student outcomes, particularly for low-income and minority students.

(b) Response: The agency agrees that these opportunities should be provided to students enrolled in secondary energy career pathways. As referenced in Section 1 of the administrative regulation, the statutory language within KRS 158.810(6), now amended to indicate KRS 158.810(7), defines a “career pathway program of study” as one which includes the opportunity for dual credit.

Also, as referenced above in the agency’s response under Subject Matter #2, grant applicants are evaluated on their program’s implementation and sustainability plans. This planning must include the establishment of agreements among secondary and postsecondary partners that provide for articulated and/or dual credit.

Because statutory language and the grant application currently define these expectations, no amendments have been made in response to this comment.

**Summary of Statement of Consideration
Action Taken by Promulgating Administrative Body**

The Kentucky Department of Education received and has responded to comments from the public regarding proposed amendments to 705 KAR 4:250. The commenter requested that Section 1 of this administrative regulation reference the term “career pathway program of study”, as defined in KRS 158.810(7). The commenter stated that this classification more appropriately defines the intended audience of potential grant applicants, rather than the term referenced within KRS 158.810(6) known as a “career pathway.” In response to this concern, the agency has amended this statutory reference.

The commenter requested an amendment to Section 4 of the administrative regulation to insert a new subsection 4(b), which would verify that all curriculum be “certified” by both industry and postsecondary partners engaged in the field of energy. The agency agrees that all curriculum programs, regardless of the developer, should have involvement from these stakeholder groups during the development phases, which would include the support and buy-in of the program from various representatives within the field. The agency has proposed a change in terminology from “certified” to “reviewed and supported by” in response to this comment.

The commenter recommended that all energy grant applications be signed by an institution of higher education that confers degrees in engineering, in addition to existing requirements for the signatures of the district Superintendent, school-based decision making councils, and local boards of education. The agency states that KRS 160.345 (2)(i)(1) establishes that the school-based decision making council has the responsibility of determining and developing the school’s curriculum. Postsecondary institutions have no authority over such decisions; therefore the agency declines to make an amendment in response to this comment.

The commenter requested that Section 4 of the regulation be amended to include a subsection (d) which would require all energy career pathways to include the opportunity for students to earn college credit by enrolling in dual credit or through articulation agreements. The agency notes that KRS 13A.120(e) prohibits the promulgation of administrative regulations when a statute prescribes the same or similar procedures for the matter regulated. Because statutory language and the grant application currently define these expectations, the agency declines to repeat the text of a statute in the proposed regulation.

The agency proposes the following amendments after comments to the administrative regulation:

Page 1

Section 1(1)

Line 16

After "Career pathway", insert "program of study".

After "KRS 158.810", insert "(7)".

Delete "(6)".

Page 3

Section 2(4)(b)

Line 10

After "(b)", insert the following:

A curriculum that has been reviewed and is supported by representatives from the energy technology industry and by an institution of higher education as a curriculum that will prepare students for success in either college or career within the energy industry;

(c)

Page 3

Section 2(4)(c) and (d)

Lines 12 and 17

Renumber these two paragraphs by inserting "(d)" and "(e)", respectively, and by deleting "(c)" and "(d)".